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Proton Scattering in Carbon, by M. Martin.
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NASA TT F-11,338

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Remarks on "Proton Scattering in Carbon",
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and V. Wintersteiger, 41 pp.

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ATS 52 F3G
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Variation of the Electrical and Magnetic Properties
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Cascade Generators for Accelerating Particles to
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AEC UCRL Tr 531

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Sodium Chloride Stress in Adrenal-Ectomized Dogs
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SLA 57-2978

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AEC W-3853

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Elastic and Inelastic Scattering for Protons on
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Studies of the Conversion-Electron Correlation
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AERE, Harwell
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Sci - Phys

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P. Diehl,

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Sci - Nuc Phys

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The Half-Life and Decay Scheme of U^{235} , by E.
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Busch, G. and Vogt, O.
MAGNETIC SUSCEPTIBILITY OF LIQUID SELENIUM
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Flüssigen Selen und Tellur) tr. by D. A. Sinclair.
1961, 5p. NRCC Technical Trans. 983.
Order from NRCC \$0.50

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v. 30, p. 224-227.

DESCRIPTORS: Liquids, *Selenium, *Tellurium, *Mag-
netic susceptibility.

(Physics--Magnetism, TT, v. 7, no. 6)

61-25806

- I. Busch, G.
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Sci - Chem; Phys
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Sci - Electron
Aug 62

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Mechanism of (n, 2n) Reaction of Be-9 and
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Neutron Energy of 3.7 Mev, by P. Huber, R.
Wagner, 4 pp.

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The Decay of ^{67}Cu , by W. Beusch.
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A Nuclear Resonance Spectrograph With High
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AEC Tr 3800

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Production of Very Homogeneous Axially Symmetrical
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Gauthard, 18 pp.

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AEC Tr 3801

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Substances. Particular Case of CsI (Summary
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C-37 NP NSA Dep.(mc)

Modulation Method for Nuclear Resonance Spectroscopy with High Resolution, by H. Primas, 7 pp.

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12p. 8 refs.
Order from SLA \$1.60

62-14561

I. Enz, H.
II. Rossel, J.

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v. 31 [no. 1] p. 25-32.

DESCRIPTORS: *Cesium compounds, *Iodides,
*Sodium compounds, *Luminescence, Crystals,
Lattices.

Improved measurements of the decay law and of the
temperature dependence of the decay time and lumines-
cent yield were made for two types of scintillations in
pure CsI and NaI. The results show that the one type
is described by a relatively simple model and may be
explained, as already suggested for NaI, as the re-
combination of degenerated excitons, self-trapped in
the crystal lattice. The other type of scintillations,
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Müller, K. Alexander.
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Order from SLA \$5.60

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Trans. of Helvetica Physica Acta (Switzerland) 1958,
v. 31 [no. 3] p. 173-204.

DESCRIPTORS: *Strontium compounds, *Titanates,
*Single crystals, Crystals, Iron, Ions, *Paramagnetic
resonance, Resonance.

(Physics--Solid State, TT, v. 8, no. 5)

62-16102

I. Müller, K. A.

Office of Technical Services

CEA-tr-A-974 Uncl.

EXCITATION DES NIVEAUX DE RAYONNEMENT INSTABLES
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C-34 NP NSA Dep.(mc); \$2.60(fs), \$1.01(mf)
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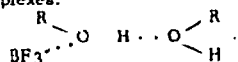
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Investigations of the displacement of OH proton reso-
nances as a function of the BF_3 concentration in BF_3 -
alcohol complexes show the existence of mono- and
dicomplexes, and confirm the recently proposed struc-
ture for the dicomplexes:



Between different BF_3 complexes, an exchange of BF_3
groups takes place. For the exchange of BF_3 between
 $\text{BF}_3\text{C}_2\text{H}_5\text{OH}$ and $\text{BF}_3\text{C}_2\text{H}_5\text{OH}$ the activation energy is
7.3 : 1 kcal/mole. The chemical components of the
system $\text{H}_2\text{O}-\text{BF}_3$ are identified as the HBF_4 , HBF_3OH .
(Chemistry--Physical, TT. v. 5, no. 5) (over)

61-10202

1. Boron fluorides--Exchange reactions
2. Complex compounds--Spectra
3. Magnetic resonance--Applications
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146, 947

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Order from SLA: \$1.60 as TT-65-14523

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MR 690

A Special Thermoluminescence
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Dec 66

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Exchange Interaction Between Superconduction ~~XXXXXXXXXX~~
Electrons of a Superconductor and Paramagnetic Ions,
by Walter Baltensperger, '71P

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6AEC-7-5978

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Growth of Ice Water Mixtures in an Experimental^a
Hail Tunnel, by Roland List, 3 pp.

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No 4, 1959, pp 293-296.

Amer Meteorol Soc T-G-165
AF Cambridge Res Center

Sci - ~~HELVETICA~~ Geophys
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The Absolute Measurement of Radioactive Source
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Hulliger, F. von.
ON THE CONNECTION BETWEEN MAGNETISM AND
ELECTRICAL CONDUCTIVITY OF COMPOUNDS
WITH TRANSITION ELEMENTS. [1963] 54p. (figs.
tables [refs.] omitted).
Order from SLA \$5.60

63-14855

Trans. of Helvetica Physica Acta (Switzerland) 1959,
v. 32, p. 615-654.

DESCRIPTORS: *Chemical bonds, *Magnetism,
*Electrical conductance, Chemical compounds, *Tran-
sition elements, Valence, Electrons, *Semiconductors,
Ferromagnetism.

In judging the compounds with transition elements the
problem consists of being able to conclude whether the
non-binding d- or f-electrons are independent from the
binding-electrons. A partial occupation of energetically
(Physics--Solid State, TT, v. 10, no. 4) (over)

63-14855

I. Hulliger, F. von

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Superconductivity in Alloys of Molybdenum With
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J. Muller, 3 pp.

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1959, pp 318-320. 9077276

ACSIL Tr No 1282

Sci - Min/Metals, Phys

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J. Geiss, B. Hirt, et al, 3 *pp.*

GERMAN, per, Helvetica Physica Acta, Vol XXXIII,
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*AEC-TR-5851

Sci - Phys

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A Photomultiplier With a Sb - Na - K Cathode, by
W. Baumgartner, J. Linder, 5 pp.

GERMAN, per, Helv Phys Acta, Vol XXXIII, 1960,
pp 608-. 197, 834

AEC UCL Tr-809(L)

Sci - Phys
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MINERALS AS MODELS FOR NEW SEMICONDUCTOR
COMPOUNDS. [1961] [13]p. 7 refs.
Order from SLA \$1.60

61-16513

Trans. of Helv[etice] Phys[ica] Acta (Switzerland) 1960,
v. 33 [no. 5/7] p. 657-666.

DESCRIPTORS: Selenides, Tellurides, *Minerals,
*Semiconductors, Energy, Lattices.

New semiconductor compounds can be obtained by combination of binary semiconductors. However, the possible mixing ratios must usually first be determined experimentally. An indication of possible stoichiometric relations in ternary and quaternary selenide and telluride semiconductors is obtained from the natural nonmetallic sulfo minerals. Partial replacement of the elements in the minerals by chemically related ones leads to a large number of new semiconductors with
(Physics--Solid State, TT, v. 6, no. 6) (over)

61-16513

L. Busch, G.
H. Hulliger, F.

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Office of Technical Services

Houdermann, F. G.
THE MASER EFFECT IN THE OPTICAL SPECTRAL
REGION AND THE POSSIBILITY OF ABSOLUTE NEG-
ATIVE ABSORPTION FOR SEVERAL CASES OF MO-
LECULAR SPECTRA (LIGHT AVALANCHE). [1963] 9p

27 refs
Order from SLA \$1.10

63-18148

Trans. of Helvetica Physica Acta (Switzerland) 1960,
v. 33, p. 933-940.

DESCRIPTORS: *Masers, *Microwave amplifiers,
*Optics, *Molecular spectroscopy, Excitation, Atoms,
Photons, Gases, Plasma physics, Lasers.

(Physics--Optics, TT, v. 10, no. 10)

63-18148

I. Houdermann, F. G.

Office of Technical Services

Ehrat, R. and Rivier, D.
ON THE THEORY OF ENERGY BANDS FOR TRANSITION METALS OF THE FIRST PERIOD. [1961] 7p.
23 refs.
Order from SLA \$1. 10

61-18691

Trans. of Helvetica Physica Acta (Switzerland) 1960,
v. 33, no. 9, p. 954-959.

DESCRIPTORS: *Metals, *Transition elements, Energy,
Specific heat, Electrons, Theory.

Recent measurements of the specific electronic heat γ and the common Hall constant R_H as a function of Z seems to challenge the general band model for the transition metals and, particularly, the approximation of the rigid band. Perhaps better approximations of the band theory will re-establish agreement with experiment. It seems desirable to extend the measurements (over)
(Physics, T.T. v. 6, no. 10)

61-18691

I. Ehrat, R.
II. Rivier, D.

Office of Technical Services

A Source of Polarized Deuterons and Detection of
the Polarization by the (d,T) Reaction, by H. Rudin,
H. R. Striebel, E. Baumgartner, 28 pp.

GERMAN, per, Helvetica Physica Acta, Vol XXXIV,
No 1, 1961, pp 58-84. 9093432

AEPS, Harwell Tr-830

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Pyromellitic Acid and Cumidic Acid
Derivatives. Part II, by H. Hopff.
GERMAN, per, Helvetica Chimica Acta,
Vol 43, 1960, pp 1645-1653
NTC 72-11605-07C

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Atomic Quadrupole Resonances, Feshbach Transitions
and Hyperpolarizability of the Alkali Iodides,
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REVIEW, 1963, Nuclear Physics A, Vol XXXIV,
No 1, 1963, pp 305-350.

OSIRI/No 5745

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A Generalized Perturbation Theory for
Quantum-Mechanical Many-Body Problems,
by H. Primas.

SWISS, per, Helv. Phys. Acta, Vol 34,
1961, pp 331-351.

OT 8225

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Sci-Phys

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62-16597

Beck, A. and Mooser, E.
APPARATUS FOR PULLING SINGLE CRYSTALS OF
COMPOUNDS WITH VOLATILE COMPONENTS. [1962]
5p. 5 refs.

Order from SLA \$1.10

62-16597

Trans. of Helv[etica] Phys[ica] Acta (Switzerland) 1961,
v. 34, 15 Aug, p. 370-373.

DESCRIPTORS: *Single crystals, Crystals, *Crystal
holders, Metallic crystals.

The apparatus uses magnetic coupling combined with a
new drive system for the crystal holder. Due to the
special shape of the pole pieces and the two hollow
cylinders of Hiperco (Curie point 970°C) sealed in the
seed holder, the latter is always attracted to the same
pole piece. If the magnet rotates around the axis of the
ampoule, the seed holder on its two roller tracks rolls
(Physics--Solid State, TT, v. 10, no. 6) (over)

I. Beck, A.
II. Mooser, E.

Office of Technical Services

Electrical Field Gradients in Ion Crystals, by
E. Brun, S. Hafner, et al.

GERMAN, per, Helv. Phys. Acta, Vol ~~XXXX~~ XXXIV,
1961, pp 391-392.

AEI/SCL-T-440

Sci - Phys

Apr 63

226,778

Exchange Interaction Between Superconduction ~~XXXXXXXXXX~~
Electrons of a Superconductor and Paramagnetic Ions,
by Walter Baltensperger, 17M

GERMAN, per, Helvetica Physica Acta, Vol XXXII, 1959,
pp 197-212. 9214718

CAEC-7-5978

Sci - Nucl Sci

Aug 63

Growth of Ice Water Mixtures in an Experimental^a
Hail Tunnel, by Roland List, 3 pp.

GERMAN, per, Helvetica Physica Acta, Vol XXXII,
No 4, 1959, pp 293-296.

Amer Meteorol Soc T-G-165
AF Cambridge Res Center

Sci - ~~XXXXXXXX~~ Geophys
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The Absolute Measurement of Radioactive Source Strengths by Means of a New Form of the Coincidence Method, by K. P. Meyer, P. Schmid, P. Huber, 26 pp.

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AEC AECL-978

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Vol XXXII, 1959, pp 423-444. ~~XXXX~~ 9093529

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The Fermi Surface of Aluminum, by B. Luthi.
UNCLASSIFIED

GERMAN, per: ^{etia} Helv Physica Acta. Vol XXXII, No 6/7,
1959, pp 470-473. 957679

Navy 2601/NRL 810

Sci - Physics
Aug 60

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Hulliger, F. von.
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ELECTRICAL CONDUCTIVITY OF COMPOUNDS
WITH TRANSITION ELEMENTS. [1963] 54p. (figs.
tables [refs.] omitted).
Order from SLA \$5.60

63-14855

Trans. of Helvetica Physica Acta (Switzerland) 1959,
v. 32, p. 615-654.

DESCRIPTORS: *Chemical bonds, *Magnetism,
*Electrical conductance, Chemical compounds, *Tran-
sition elements, Valence, Electrons, *Semiconductors,
Ferromagnetism.

In judging the compounds with transition elements the
problem consists of being able to conclude whether the
non-binding d- or f-electrons are independent from the
binding-electrons. A partial occupation of energetically
(Physics--Solid State, TT, v. 10, no. 4) (over)

63-14855

I. Hulliger, F. von

Office of Technical Services

Superconductivity in Alloys of Molybdenum With
Titanium and Vanadium, by E. Bucher, G. Busch,
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Order from SLA \$1.60

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Trans. of Helv[etia] Phys[ica] Acta (Switzerland) 1960,
v. 33 [no. 6/7] p. 657-666.

DESCRIPTORS: Selenides, Tellurides, *Minerals,
*Semiconductors, Energy, Lattices.

New semiconductor compounds can be obtained by combination of binary semiconductors. However, the possible mixing ratios must usually first be determined experimentally. An indication of possible stoichiometric relations in ternary and quaternary selenide and telluride semiconductors is obtained from the natural nonmetallic sulfide minerals. Partial replacement of the elements in the minerals by chemically related ones leads to a large number of new semiconductors with (Physics--Solid State, TT, v. 6, no. 6) (over)

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LECULAR SPECTRA (LIGHT AVALANCHE). [1963] 9p
27 refs
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Trans. of Helvetica Physica Acta (Switzerland) 1960,
v. 33, p. 933-940.

DESCRIPTORS: *Masers, *Microwave amplifiers,
*Optics, *Molecular spectroscopy, Excitation, Atoms,
Photons, Gases, Plasma physics, Lasers.

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DESCRIPTORS: *Metals, *Transition elements, Energy,
Specific heat, Electrons, Theory.

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holders, Metallic crystals.

The apparatus uses magnetic coupling combined with a
new drive system for the crystal holder. Due to the
special shape of the pole pieces and the two hollow
cylinders of Hiperco (Curie point 970°C) sealed in the
seed holder, the latter is always attracted to the same
pole piece. If the magnet rotates around the axis of the
ampoule, the seed holder on its two roller tracks rolls
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